```
  result in loss of user privileges and other penalties.

  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 09:15:12 ON 19 JUL 2005

=> file medline
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'MEDLINE' ENTERED AT 09:15:22 ON 19 JUL 2005

 FILE LAST UPDATED: 16 JUL 2005 (20050716/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

 OLDMEDLINE now back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2005 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> e Schirrmacher V/au
E1            1     SCHIRRMACHER THOMAS/AU
E2            1     SCHIRRMACHER U O/AU
E3          280 --> SCHIRRMACHER V/AU
E4           29     SCHIRRMACHER VOLKER/AU
E5            1     SCHIRRMACHER W/AU
E6            1     SCHIRRMAKER VOLKER/AU
E7            1     SCHIRRMANN/AU
E8            1     SCHIRRMANN I/AU
E9            3     SCHIRRMANN T/AU
E10           2     SCHIRRMANN THOMAS/AU
E11          20     SCHIRRMEIER H/AU
E12           4     SCHIRRMEIER HORST/AU

=> s e3
L1          280 "SCHIRRMACHER V"/AU

=> s e4
L2           29 "SCHIRRMACHER VOLKER"/AU

=> s l1 and activation by cancer vaccine
         488775 ACTIVATION
         502840 CANCER
          85621 VACCINE
              0 ACTIVATION BY CANCER VACCINE
                  (ACTIVATION(1W)CANCER(W)VACCINE)
L3            0 L1 AND ACTIVATION BY CANCER VACCINE

=> s l1 and cancer vaccine
         502840 CANCER
          85621 VACCINE
            416 CANCER VACCINE
                  (CANCER(W)VACCINE)
L4            7 L1 AND CANCER VACCINE

=> d l4 1-7
```

L4 ANSWER 1 OF 7 MEDLINE on STN
AN 1999285706 MEDLINE
DN PubMed ID: 10359211
TI An effective strategy of human tumor vaccine modification by coupling bispecific costimulatory molecules.
AU Haas C; Herold-Mende C; Gerhards R; **Schirrmacher V**
CS German Cancer Research Center, Tumor Immunology Program, Heidelberg.
SO Cancer gene therapy, (1999 May-Jun) 6 (3) 254-62.
Journal code: 9432230. ISSN: 0929-1903.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 199910
ED Entered STN: 19991014
Last Updated on STN: 19991014
Entered Medline: 19991005

L4 ANSWER 2 OF 7 MEDLINE on STN
AN 1999273423 MEDLINE
DN PubMed ID: 10341877
TI Human tumor cell modification by virus infection: an efficient and safe way to produce **cancer vaccine** with pleiotropic immune stimulatory properties when using Newcastle disease virus.
AU **Schirrmacher V**; Haas C; Bonifer R; Ahlert T; Gerhards R; Ertel C
CS Division of Cellular Immunology, German Cancer Research Center, Heidelberg, Germany.
SO Gene therapy, (1999 Jan) 6 (1) 63-73.
Journal code: 9421525. ISSN: 0969-7128.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199906
ED Entered STN: 19990618
Last Updated on STN: 19990618
Entered Medline: 19990610

L4 ANSWER 3 OF 7 MEDLINE on STN
AN 1999081280 MEDLINE
DN PubMed ID: 9865682
TI Immunization with virus-modified tumor cells.
AU **Schirrmacher V**; Ahlert T; Probstle T; Steiner H H; Herold-Mende C; Gerhards R; Hagmuller E; Steiner H H
CS Abteilung Zellulare Immunologie (G0100), Deutsches Krebsforschungszentrum, Heidelberg, Germany.
SO Seminars in oncology, (1998 Dec) 25 (6) 677-96. Ref: 66
Journal code: 0420432. ISSN: 0093-7754.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199901
ED Entered STN: 19990128
Last Updated on STN: 19990128
Entered Medline: 19990114

L4 ANSWER 4 OF 7 MEDLINE on STN
AN 1998192213 MEDLINE
DN PubMed ID: 9533542
TI Bispecific antibodies increase T-cell stimulatory capacity in vitro of human autologous virus-modified tumor vaccine.
AU Haas C; Strauss G; Moldenhauer G; Iorio R M; **Schirrmacher V**
CS Division of Cellular Immunology, German Cancer Research Center, Heidelberg.
SO Clinical cancer research : an official journal of the American Association

for Cancer Research, (1998 Mar) 4 (3) 721-30.
Journal code: 9502500. ISSN: 1078-0432.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 199805
ED Entered STN: 19980609
Last Updated on STN: 19980609
Entered Medline: 19980528

L4 ANSWER 5 OF 7 MEDLINE on STN
AN 97154859 MEDLINE
DN PubMed ID: 9001573
TI Immunogenicity increase of autologous tumor cell vaccines by virus infection and attachment of bispecific antibodies.
AU Haas C; **Schirrmacher V**
CS German Cancer Research Center, Tumor Immunology, Program (0710), Heidelberg, Germany.
SO Cancer immunology, immunotherapy : CII, (1996 Nov) 43 (3) 190-4. Ref: 41
Journal code: 8605732. ISSN: 0340-7004.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199702
ED Entered STN: 19970227
Last Updated on STN: 19970227
Entered Medline: 19970210

L4 ANSWER 6 OF 7 MEDLINE on STN
AN 95334878 MEDLINE
DN PubMed ID: 7610516
TI [Tumor vaccination in renal cell carcinoma with and without interleukin-2 (IL-2) as adjuvant. A clinical contribution to the development of effective active specific immunization].
Tumorvakzination bei Nierenzellkarzinom mit und ohne Interleukin-2 (IL-2) als Adjuvans. Ein klinischer Beitrag zur Entwicklung wirksamer aktiver spezifischer Immunisierung.
AU Pomer S; Thiele R; Staehler G; Drehmer I; Lohrke H; **Schirrmacher V**
CS Abteilung Urologie, Universitat Heidelberg.
SO Der Urologe. Ausg. A, (1995 May) 34 (3) 215-20.
Journal code: 1304110. ISSN: 0340-2592.
CY GERMANY: Germany, Federal Republic of
DT (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals; AIDS
EM 199508
ED Entered STN: 19950828
Last Updated on STN: 19970203
Entered Medline: 19950811

L4 ANSWER 7 OF 7 MEDLINE on STN
AN 93046225 MEDLINE
DN PubMed ID: 1423321
TI Immunity and metastasis: in situ activation of protective T cells by virus modified cancer vaccines.
AU **Schirrmacher V**
CS Institut fur Immunologie und Genetik, Deutsches Krebsforschungszentrum, Heidelberg, Germany.
SO Cancer surveys, (1992) 13 129-54. Ref: 85
Journal code: 8218015. ISSN: 0261-2429.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)

(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199212
ED Entered STN: 19930122
Last Updated on STN: 19930122
Entered Medline: 19921201

=> d his

(FILE 'HOME' ENTERED AT 09:15:12 ON 19 JUL 2005)

FILE 'MEDLINE' ENTERED AT 09:15:22 ON 19 JUL 2005
E SCHIRRMACHER V/AU
L1 280 S E3
L2 29 S E4
L3 0 S L1 AND ACTIVATION BY CANCER VACCINE
L4 7 S L1 AND CANCER VACCINE

=> s l2 and cancer vaccine
502840 CANCER
85621 VACCINE
416 CANCER VACCINE
(CANCER(W)VACCINE)
L5 0 L2 AND CANCER VACCINE

=> s l2 and cancer
502840 CANCER
L6 12 L2 AND CANCER

=> d l6 1-12 ti

L6 ANSWER 1 OF 12 MEDLINE on STN
TI Clinical trials of antitumor vaccination with an autologous tumor cell vaccine modified by virus infection: improvement of patient survival based on improved antitumor immune memory.

L6 ANSWER 2 OF 12 MEDLINE on STN
TI T-cell triggering by CD3- and CD28-binding molecules linked to a human virus-modified tumor cell vaccine.

L6 ANSWER 3 OF 12 MEDLINE on STN
TI Antitumor immunization of head and neck squamous cell carcinoma patients with a virus-modified autologous tumor cell vaccine.

L6 ANSWER 4 OF 12 MEDLINE on STN
TI Antitumor vaccination in patients with head and neck squamous cell carcinomas with autologous virus-modified tumor cells.

L6 ANSWER 5 OF 12 MEDLINE on STN
TI Antitumor vaccination of patients with glioblastoma multiforme: a pilot study to assess feasibility, safety, and clinical benefit.

L6 ANSWER 6 OF 12 MEDLINE on STN
TI Specifically activated memory T cell subsets from **cancer** patients recognize and reject xenotransplanted autologous tumors.

L6 ANSWER 7 OF 12 MEDLINE on STN
TI Characteristics of a potent tumor vaccine-induced secondary anti-tumor T cell response.

L6 ANSWER 8 OF 12 MEDLINE on STN
TI A novel tumour model system for the study of long-term protective immunity and immune T cell memory.

L6 ANSWER 9 OF 12 MEDLINE on STN
TI Efficient engraftment of human primary breast **cancer** transplants

in nonconditioned NOD/Scid mice.

L6 ANSWER 10 OF 12 MEDLINE on STN
TI Influence of adjuvant hormone therapy and chemotherapy on the immune system analysed in the bone marrow of patients with breast **cancer**

L6 ANSWER 11 OF 12 MEDLINE on STN
TI T cell memory, anergy and immunotherapy in breast **cancer**.

L6 ANSWER 12 OF 12 MEDLINE on STN
TI Cognate interactions between memory T cells and tumor antigen-presenting dendritic cells from bone marrow of breast **cancer** patients: bidirectional cell stimulation, survival and antitumor activity in vivo.

=> d his

(FILE 'HOME' ENTERED AT 09:15:12 ON 19 JUL 2005)

FILE 'MEDLINE' ENTERED AT 09:15:22 ON 19 JUL 2005
E SCHIRRMACHER V/AU
L1 280 S E3
L2 29 S E4
L3 0 S L1 AND ACTIVATION BY CANCER VACCINE
L4 7 S L1 AND CANCER VACCINE
L5 0 S L2 AND CANCER VACCINE
L6 12 S L2 AND CANCER

=> file biosis
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 3.85 4.06

FILE 'BIOSIS' ENTERED AT 09:19:48 ON 19 JUL 2005

FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 14 July 2005 (20050714/ED)

FILE RELOADED: 19 October 2003.

=> e Schirrmacher V/au
E1 2 SCHIRRMACHER S/AU
E2 1 SCHIRRMACHER U O E/AU
E3 344 --> SCHIRRMACHER V/AU
E4 90 SCHIRRMACHER VOLKER/AU
E5 1 SCHIRRMANN I/AU
E6 1 SCHIRRMANN INES/AU
E7 1 SCHIRRMANN T/AU
E8 4 SCHIRRMANN THOMAS/AU
E9 16 SCHIRRMEIER H/AU
E10 4 SCHIRRMEIER HORST/AU
E11 2 SCHIRRMEISTER D/AU
E12 1 SCHIRRMEISTER F/AU

=> s e3
L7 344 "SCHIRRMACHER V"/AU

=> s e4
L8 90 "SCHIRRMACHER VOLKER"/AU

=> s l7 and cancer vaccines
493163 CANCER
30108 VACCINES

616 CANCER VACCINES
(CANCER(W)VACCINES)
L9 4 L7 AND CANCER VACCINES

=> d l9 1-4

L9 ANSWER 1 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1997:216206 BIOSIS
DN PREV199799522710
TI Tumor-cell number and viability as quality and efficacy parameters of autologous virus-modified **cancer vaccines** in patients with breast or ovarian cancer.
AU Ahlert, T.; Sauerbrei, W.; Bastert, G.; Ruhland, S.; Bartik, B.; Simiantonaki, N.; Schumacher, J.; Haecker, B.; Schumacher, M.; **Schirrmacher, V.** [Reprint author]
CS Deutsches Krebsforschungszentrum, Abteilung 710, Im Neuenheimer Feld 280, 69120 Heidelberg, Germany
SO Journal of Clinical Oncology, (1997) Vol. 15, No. 4, pp. 1354-1366.
CODEN: JCONDN. ISSN: 0732-183X.
DT Article
LA English
ED Entered STN: 22 May 1997
Last Updated on STN: 22 May 1997

L9 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1994:113181 BIOSIS
DN PREV199497126181
TI Active specific immunotherapy: A new modality of cancer treatment involving the patient's own immune system.
AU **Schirrmacher, V.**
CS Deutsches Krebsforschungszentrum, Abteilung Zellulaire Immunol., Im Neuenheimer Feld 280, D-69120 Heidelberg, Germany
SO Onkologie, (1993) Vol. 16, No. 5, pp. 290-296.
CODEN: ONKOD2. ISSN: 0378-584X.
DT Article
LA English
ED Entered STN: 14 Mar 1994
Last Updated on STN: 14 Mar 1994

L9 ANSWER 3 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1992:420038 BIOSIS
DN PREV199243064188; BR43:64188
TI IMMUNITY AND METASTASIS IN-SITU ACTIVATION OF PROTECTIVE T CELLS BY VIRUS MODIFIED **CANCER VACCINES**.
AU **SCHIRRMACHER V** [Reprint author]
CS INST IMMUNOL GENET, DEUTSCHES KREBSFORSCHUNGSZENTRUM, IM NEUENHEIMER FELD 280, 6900 HEIDELBERG 1, GER
SO Cancer Surv., (1992) pp. 129-154. MCMICHAEL, A. J. AND W. F. BODMER (ED.). CANCER SURVEYS, VOL. 13. A NEW LOOK AT TUMOUR IMMUNOLOGY. VII+211P. COLD SPRING HARBOR LABORATORY PRESS: PLAINVIEW, NEW YORK, USA. ILLUS.
Publisher: Series: Cancer Surveys.
CODEN: CASUD7. ISSN: 0261-2429. ISBN: 0-87969-370-3.
DT Book
FS BR
LA ENGLISH
ED Entered STN: 14 Sep 1992
Last Updated on STN: 14 Sep 1992

L9 ANSWER 4 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1991:229694 BIOSIS
DN PREV199191121154; BA91:121154
TI DESIGN OF A VIRUS-MODIFIED AUTOLOGOUS TUMOR VACCINE FOR ACTIVE-SPECIFIC IMMUNOTHERAPY OF CANCER METASTASIS.
AU **SCHIRRMACHER V** [Reprint author]; VON HOEGEN P; AHLERT T; HEICAPPELL R
CS DEUTSCHES KREBSFORSCHUNGSZENT, INST IMMUNOL GENET, IM NEUENHEIMER FELD 200, W-6900 HEIDELBERG 1, GERMANY
SO Archiv fuer Geschwulstforschung, (1991) Vol. 61, No. 1, pp. 23-27.

CODEN: ARGEAR. ISSN: 0003-911X.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 9 May 1991
Last Updated on STN: 9 May 1991

=> d l9 1-4 all

L9 ANSWER 1 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1997:216206 BIOSIS
DN PREV199799522710
TI Tumor-cell number and viability as quality and efficacy parameters of autologous virus-modified **cancer vaccines** in patients with breast or ovarian cancer.
AU Ahlert, T.; Sauerbrei, W.; Bastert, G.; Ruhland, S.; Bartik, B.; Simiantonaki, N.; Schumacher, J.; Haecker, B.; Schumacher, M.; **Schirrmacher, V.** [Reprint author]
CS Deutsches Krebsforschungszentrum, Abteilung 710, Im Neuenheimer Feld 280, 69120 Heidelberg, Germany
SO Journal of Clinical Oncology, (1997) Vol. 15, No. 4, pp. 1354-1366.
CODEN: JCONDN. ISSN: 0732-183X.
DT Article
LA English
ED Entered STN: 22 May 1997
Last Updated on STN: 22 May 1997
AB Purpose: We investigated quality and efficacy criteria of an autologous, physically and immunologically purified, Newcastle disease virus (NDV)-modified, irradiated tumor-cell vaccine (ATV-NDV) by analyzing three independent cohorts (a through c) of patients vaccinated between 1991 and 1995. Materials and Methods: Included were 63 patients with primary breast cancer (a), 27 with metastatic pretreated breast cancer (b), and 31 with metastatic pretreated ovarian cancer (c). In addition to vaccine, cohorts b and c received nonspecific immunotherapy as supportive treatment. After cryoconservation and purification, the vaccines varied in applied numbers of viable cells and dead cell contaminations. We retrospectively hypothesized that an immunogenic vaccine should contain at least 1.5 times 10-6 viable tumor cells and viability should be at least 33%. Each cohort was thus divided into two groups: one that received vaccine type A (A), fulfilling both criteria; and the other type B (B), missing one or both criteria. Results: Conventional prognostic factors were well balanced between A and B in cohorts a and c. In cohort a, there was a benefit in survival (P = .026) and disease-free survival (P = .089) for A. In addition, in cohort a, the relative risk of dying in the group that received A as compared with B was 0.2 (univariate Cox model). There were also survival trends in favor of A versus B (P = .18 and P = .09, respectively) in cohorts b and c, with relative risks of 0.5 and 0.42, respectively. In cohort b, the survival benefit could not be ascribed to vaccine quality alone, because of prognostic imbalance in favor of A. Conclusion: In cohort c, like in cohort a, the survival benefit or A may be ascribed to the ATV-NDV vaccine quality, since prognostic factors were not biased. This could imply clinical effectivity in breast and ovarian cancer with ATV-NDV high-quality vaccine. Furthermore, the data provide clinically relevant information for standardization and quality control of autologous tumor-cell vaccines. A randomized study is urgently needed.
CC Cytology - Human 02508
Biochemistry studies - General 10060
Pathology - General 12502
Reproductive system - General and methods 16501
Pharmacology - General 22002
Neoplasms - General 24002
IT Major Concepts
Biochemistry and Molecular Biophysics; Cell Biology; Oncology (Human Medicine, Medical Sciences); Pathology; Pharmacology; Reproductive System (Reproduction)
IT Miscellaneous Descriptors
AUTOLOGOUS VIRUS-MODIFIED CANCER VACCINE; BREAST CANCER; NEOPLASTIC

DISEASE; NUMBER; ONCOLOGY; OVARIAN CANCER; PATIENT; PHARMACOLOGY; REPRODUCTIVE SYSTEM DISEASE/FEMALE; TUMOR CELL; VIABILITY

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

L9 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1994:113181 BIOSIS
DN PREV199497126181
TI Active specific immunotherapy: A new modality of cancer treatment involving the patient's own immune system.
AU **Schirrmacher, V.**
CS Deutsches Krebsforschungszentrum, Abteilung Zellulaire Immunol., Im Neuenheimer Feld 280, D-69120 Heidelberg, Germany
SO Onkologie, (1993) Vol. 16, No. 5, pp. 290-296.
CODEN: ONKOD2. ISSN: 0378-584X.
DT Article
LA English
ED Entered STN: 14 Mar 1994
Last Updated on STN: 14 Mar 1994
AB This review deals with active specific immunotherapy (ASI) - a type of cancer immunotherapy which involves the use of **cancer vaccines** for active immunization of cancer patients. It starts with theoretical foundations, then summarizes preclinical data from animal models and then presents and discusses clinical observations from respective immunotherapy trials. Based on new insights into T-cell stimulation (two-signal activation) and on own experience in immunological cancer rejection in metastasizing animal tumor models, we propose for ASI studies the use of a two-component cancer vaccine for postoperative active immunization. As a specific component, we use intact, viable, radiation-inactivated autologous tumor cells, which should represent the closest match to a patient's own cancer. If this is not possible, cells from allogeneic corresponding tumors or from homologous tumor cell lines could be used. As a second nonspecific component, we have good experience with a virus, the Newcastle Disease Virus (NDV), which can easily attach to the cells of the vaccine to facilitate the delivery of costimulatory signals to tumor-reactive T cells. Clinical experience with ASI and variables of potential importance for the design of **cancer vaccines** are also reviewed.
CC Cytology - Human 02508
Pathology - Therapy 12512
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Pharmacology - Clinical pharmacology 22005
Pharmacology - Immunological processes and allergy 22018
Neoplasms - Immunology 24003
Neoplasms - Therapeutic agents and therapy 24008
Virology - Animal host viruses 33506
Immunology - Immunopathology, tissue immunology 34508
IT Major Concepts
Blood and Lymphatics (Transport and Circulation); Cell Biology; Clinical Endocrinology (Human Medicine, Medical Sciences); Microbiology; Oncology (Human Medicine, Medical Sciences); Pharmacology
IT Miscellaneous Descriptors
CANCER VACCINE; T-CELL STIMULATION
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

ORGN Classifier
Paramyxoviridae 03503
Super Taxa
Negative Sense ssRNA Viruses; Viruses; Microorganisms
Organism Name
Newcastle disease virus
Taxa Notes
Microorganisms, Negative Sense Single-Stranded RNA Viruses, Viruses

L9 ANSWER 3 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1992:420038 BIOSIS
DN PREV199243064188; BR43:64188
TI IMMUNITY AND METASTASIS IN-SITU ACTIVATION OF PROTECTIVE T CELLS BY VIRUS MODIFIED **CANCER VACCINES**.
AU **SCHIRRMACHER V** [Reprint author]
CS INST IMMUNOL GENET, DEUTSCHES KREBSFORSCHUNGSZENTRUM, IM NEUENHEIMER FELD 280, 6900 HEIDELBERG 1, GER
SO Cancer Surv., (1992) pp. 129-154. MCMICHAEL, A. J. AND W. F. BODMER (ED.). CANCER SURVEYS, VOL. 13. A NEW LOOK AT TUMOUR IMMUNOLOGY. VII+211P. COLD SPRING HARBOR LABORATORY PRESS: PLAINVIEW, NEW YORK, USA. ILLUS.
Publisher: Series: Cancer Surveys.
CODEN: CASUD7. ISSN: 0261-2429. ISBN: 0-87969-370-3.
DT Book
FS BR
LA ENGLISH
ED Entered STN: 14 Sep 1992
Last Updated on STN: 14 Sep 1992
CC Cytology - Human 02508
Pathology - Therapy 12512
Blood - Blood cell studies 15004
Blood - Lymphatic tissue and reticuloendothelial system 15008
Pharmacology - Immunological processes and allergy 22018
Neoplasms - Immunology 24003
Neoplasms - Pathology, clinical aspects and systemic effects 24004
Neoplasms - Therapeutic agents and therapy 24008
Immunology - General and methods 34502
IT Major Concepts
Blood and Lymphatics (Transport and Circulation); Immune System (Chemical Coordination and Homeostasis); Oncology (Human Medicine, Medical Sciences); Pharmacology
IT Miscellaneous Descriptors
HUMAN IMMUNOTHERAPY
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

L9 ANSWER 4 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1991:229694 BIOSIS
DN PREV199191121154; BA91:121154
TI DESIGN OF A VIRUS-MODIFIED AUTOLOGOUS TUMOR VACCINE FOR ACTIVE-SPECIFIC IMMUNOTHERAPY OF CANCER METASTASIS.
AU **SCHIRRMACHER V** [Reprint author]; VON HOEGEN P; AHLERT T; HEICAPPELL R
CS DEUTSCHES KREBSFORSCHUNGSZENT, INST IMMUNOL GENET, IM NEUENHEIMER FELD 200, W-6900 HEIDELBERG 1, GERMANY
SO Archiv fuer Geschwulstforschung, (1991) Vol. 61, No. 1, pp. 23-27.
CODEN: ARGEAR. ISSN: 0003-911X.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 9 May 1991
Last Updated on STN: 9 May 1991
AB Effective anti-metastatic therapy was achieved in a mouse tumor model by combining surgery with post-operative immunotherapy using virus-modified autologous tumor cells. No therapeutic effect was observed when using the

non-modified autologous tumor ESb for immunotherapy, which is only weekly immunogenic and highly metastatic. The viral modification was achieved by infecting the tumor with an avirulent strain of Newcastle Disease Virus (NDV), which led to expression of viral antigens and to an increase in the tumor cells' immunogenicity. Parameters which were of decisive influence for success or failure of therapy were the time of operation of the primary tumor, the dose of tumor cells and virus and the protocol and route of vaccination. We will report on the underlying mechanism of induction of protective anti-tumor immunity and on our ongoing efforts to transfer this type of cancer vaccine into the clinic. For application in cancer patients live virus-modified autologous **cancer vaccines** are prepared by first isolating intact single cells from fresh operation specimens, by inactivating these by 200 Gy and infecting them with an avirulent strain of NDV as worked out in the animal tumor model. We have observed that in the majority of cancer patients (colon cancer, mammary carcinoma, hypernephroma and melanoma) positive delayed type hypersensitivity skin responses can be elicited at the site of vaccine application.

CC Biochemistry studies - General 10060
Anatomy and Histology - Surgery 11105
Pathology - Therapy 12512
Blood - Lymphatic tissue and reticuloendothelial system 15008
Pharmacology - General 22002
Pharmacology - Clinical pharmacology 22005
Pharmacology - Immunological processes and allergy 22018
Neoplasms - Pathology, clinical aspects and systemic effects 24004
Neoplasms - Carcinogens and carcinogenesis 24007
Neoplasms - Therapeutic agents and therapy 24008
Virology - Animal host viruses 33506
Immunology - Bacterial, viral and fungal 34504
Immunology - Immunopathology, tissue immunology 34508
Allergy 35500
Medical and clinical microbiology - Virology 36006

IT Major Concepts
Blood and Lymphatics (Transport and Circulation); Immune System (Chemical Coordination and Homeostasis); Microbiology; Pharmacology; Surgery (Medical Sciences); Tumor Biology

IT Miscellaneous Descriptors
MOUSE EPSTEIN BARR VIRUS NEWCASTLE DISEASE VIRUS POSITIVE DELAYED TYPE HYPERSENSITIVITY VACCINATION POST-OPERATIVE ANTINEOPLASTIC-DRUG THERAPY

ORGN Classifier
Herpesviridae 03115
Super Taxa
dsDNA Viruses; Viruses; Microorganisms
Taxa Notes
Double-Stranded DNA Viruses, Microorganisms, Viruses

ORGN Classifier
Paramyxoviridae 03503
Super Taxa
Negative Sense ssRNA Viruses; Viruses; Microorganisms
Taxa Notes
Microorganisms, Negative Sense Single-Stranded RNA Viruses, Viruses

ORGN Classifier
Muridae 86375
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

=> d l10 1-49 ti

L10 ANSWER 1 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI New differentially expressed stomach cancer markers identified through extended proteomics analysis on highly selected tumor samples.

L10 ANSWER 2 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Enhancement of protective efficacy following intranasal immunization with vaccine plus a nontoxic LTK63 mutant delivered with nanoparticles.

L10 ANSWER 3 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI New ionic Amphiphile BIOVECTORTM as carrier of poor solubility drugs.

L10 ANSWER 4 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI The new vaccine adjuvant OM-174 is active by the intranasal route inducing both systemic and mucosal antibody responses to protein antigens in mice.

L10 ANSWER 5 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Intra-pinna anti-tumor vaccination with self-replicating infectious RNA or with DNA encoding a model tumor antigen and a cytokine.

L10 ANSWER 6 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Superiority of the ear pinna over muscle tissue as site for DNA vaccination.

L10 ANSWER 7 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Superiority of the ear pinna over muscle tissue as site for DNA vaccination.

L10 ANSWER 8 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI In vitro and in situ modulation of tumor phenotype by TNF-alpha: Relation to metastasis.

L10 ANSWER 9 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI 8th International AEK Symposium of the Division of Experimental Cancer Research of the German Cancer Society (Heidelberg, Germany, March 29-31, 1995).

L10 ANSWER 10 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI A lacZ-transduced T-lymphoma induces immunity which suppresses micrometastatic growth and changes the pattern of liver metastasis.

L10 ANSWER 11 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Immunoregulatory potential of a murine T cell lymphoma.

L10 ANSWER 12 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Phenotypes and activation of fetal human lymphocytes.

L10 ANSWER 13 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Different types of metastasis of one lymphoma seen by gene tagging.

L10 ANSWER 14 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Both immune T-cells and IFN-alpha/beta treatment are necessary to inhibit FLC metastases in DBA/2 beige mice and ESb metastases in immunocompetent DBA/2 mice.

L10 ANSWER 15 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI AN IMMUNOLOGICAL ROLE FOR THE CB8 BETA-CHAIN.

L10 ANSWER 16 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

TI ADHESION VERSUS CORECEPTOR FUNCTION OF CD4 AND CD8 ROLE OF THE CYTOPLASMIC TAIL IN CORECEPTOR ACTIVITY.

L10 ANSWER 17 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI DESIGN OF A VIRUS-MODIFIED AUTOLOGOUS TUMOR VACCINE FOR ACTIVE-SPECIFIC IMMUNOTHERAPY OF CANCER METASTASIS.

L10 ANSWER 18 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI SPECIFIC ERADICATION OF MICROMETASTASES BY TRANSFER OF TUMOR-IMMUNE T CELLS FROM MAJOR-HISTOCOMPATIBILITY-COMPLEX CONGENIC MICE.

L10 ANSWER 19 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI SELF-TOLERANCE IN MICE TRANSGENIC FOR CD8 AND A SELF-REACTIVE CLASS I-RESTRICTED T CELL RECEPTOR.

L10 ANSWER 20 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI EXPERIMENTAL STUDIES TO THE IMMUNOTHERAPY OF CANCER METASTASES.

L10 ANSWER 21 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI DISCRIMINATION BETWEEN ADHESION AND CO-RECEPTOR FUNCTION OF CD4 AND CD8.

L10 ANSWER 22 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI FUNCTION OF CD4 AND CD8.

L10 ANSWER 23 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI SUPPRESSION OF ORGAN-COLONIZATION CELLULAR ADHESION AND INVASION OF METASTATIC TUMOR CELLS BY VIRUS INFECTION.

L10 ANSWER 24 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI THE ROLE OF CD4 AND CD8 IN T CELL FUNCTION.

L10 ANSWER 25 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI ROLE OF CD4 AND CD8 IN ENHANCING T-CELL RESPONSES TO ANTIGEN.

L10 ANSWER 26 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI MODIFICATION OF TUMOR CELLS BY A LOW DOSE OF NEWCASTLE DISEASE VIRUS III. POTENTIATION OF TUMOR-SPECIFIC CYTOLYTIC T CELLS ACTIVITY VIA INDUCTION OF INTERFERON-ALPHA-BETA.

L10 ANSWER 27 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI INABILITY OF CD8-ALPHA' POLYPEPTIDES TO ASSOCIATE WITH P56L-C-K CORRELATES WITH IMPAIRED FUNCTION IN-VITRO AND LACK OF EXPRESSION IN-VIVO.

L10 ANSWER 28 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI EQUIVALENCE OF HUMAN AND MOUSE CD4 IN ENHANCING ANTIGEN RESPONSES BY A MOUSE CLASS II-RESTRICTED T CELL HYBRIDOMA.

L10 ANSWER 29 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI ACTIVE SPECIFIC IMMUNOTHERAPY WITH TUMOR VACCINES COMPOSED TO AUTOLOGOUS TUMOR CELLS MIXED WITH NEWCASTLE DISEASE VIRUS EXPERIMENTAL AND FIRST CLINICAL STUDIES.

L10 ANSWER 30 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI VIRUS MODIFIED TUMOR CELL VACCINES FOR ACTIVE SPECIFIC IMMUNOTHERAPY OF

MICROMETASTASES EXPANSION AND ACTIVATION OF TUMOR-SPECIFIC T CELLS.

L10 ANSWER 31 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI ANTIBODY 12-15 CROSS-REACTS WITH MOUSE FC-GAMMA RECEPTORS AND CD2 STUDY OF THYMUS EXPRESSION GENETIC POLYMORPHISM AND BIOSYNTHESIS OF THE CD2 PROTEIN.

L10 ANSWER 32 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI PREVENTION OF METASTATIC SPREAD BY POSTOPERATIVE IMMUNOTHERAPY WITH VIRALLY MODIFIED AUTOLOGOUS TUMOR CELLS III. POSTOPERATIVE ACTIVATION OF TUMOR-SPECIFIC CTLP FROM MICE WITH METASTASES REQUIRES STIMULATION WITH THE SPECIFIC ANTIGEN PLUS ADDITIONAL SIGNALS.

L10 ANSWER 33 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI ACTIVATION OF TUMOR-SPECIFIC CTLP TO A CYTOLYTIC STAGE REQUIRES ADDITIONAL SIGNALS.

L10 ANSWER 34 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI A CARBOHYDRATE EPITOPE SHARED BY MOUSE CD2 AND FCR PROTEINS INVOLVEMENT IN CD2-LFA3 INTERACTION.

L10 ANSWER 35 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI MODIFICATION OF TUMOR CELLS BY A LOW DOSE OF NEWCASTLE DISEASE VIRUS II. AUGMENTED TUMOR-SPECIFIC T CELL RESPONSE AS A RESULT OF CD-4 POSITIVE AND CD-8 POSITIVE IMMUNE T CELL COOPERATION.

L10 ANSWER 36 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI MODIFICATION OF TUMOR CELLS BY A LOW DOSE OF NEWCASTLE DISEASE VIRUS AUGMENTATION OF THE TUMOR-SPECIFIC T CELL RESPONSE IN THE ABSENCE OF AN ANTI-VIRAL RESPONSE.

L10 ANSWER 37 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI VIRAL MODIFICATION AS A MODEL FOR ANALYSIS OF DIFFERENT STEPS DURING T CELL ACTIVATION.

L10 ANSWER 38 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI CD4-POSITIVE HELPER T CELLS ARE REQUIRED FOR RESISTANCE TO A HIGHLY METASTATIC MURINE TUMOR.

L10 ANSWER 39 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI NEW ANTIGENS PRESENTED ON TUMOR CELLS CAN CAUSE IMMUNE REJECTION WITHOUT INFLUENCING THE FREQUENCY OF TUMOR-SPECIFIC CYTOLYTIC T CELLS.

L10 ANSWER 40 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI MORE THAN ONE SIGNAL REQUIRED FOR ACTIVATION OF TUMOR-SPECIFIC CTLP IN TUMOR-BEARING ANIMALS.

L10 ANSWER 41 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI SUCCESSFUL APPLICATION OF NON-ONCOGENIC VIRUSES FOR ANTIMETASTATIC CANCER IMMUNOTHERAPY.

L10 ANSWER 42 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI A ROLE FOR INTERFERON IN THE ENHANCEMENT OF TUMOR SPECIFIC CTL BY VIRAL XENOGENIZATION.

L10 ANSWER 43 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on

STN
TI IMMUNORESISTANT METASTATIC TUMOR VARIANTS CAN RE-EXPRESS THEIR TUMOR ANTIGEN AFTER TREATMENT WITH DNA METHYLATION-INHIBITING AGENTS.

L10 ANSWER 44 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI THE EFFECTS OF MUTAGENS ON THE IMMUNOGENICITY AND ANTIGENICITY OF MURINE HIGH OR LOW METASTATIC LYMPHOMAS.

L10 ANSWER 45 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI FUNCTION AND MORPHOLOGY OF A TUMOR-SPECIFIC T CELL LINE.

L10 ANSWER 46 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI PREVENTION OF METASTATIC SPREAD BY POSTOPERATIVE IMMUNOTHERAPY WITH VIRALLY MODIFIED AUTOLOGOUS TUMOR CELLS I. PARAMETERS FOR OPTIMAL THERAPEUTIC EFFECTS.

L10 ANSWER 47 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI CHARACTERIZATION OF TUMOR-SPECIFIC T CELL LINES.

L10 ANSWER 48 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI MODULATIONS OF TUMOR CELL IMMUNOGENICITY RESULTING IN INCREASE OF T CELL REACTIVITY.

L10 ANSWER 49 OF 49 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI EFFECTS OF MUTAGENS ON THE IMMUNOGENICITY OF MURINE TUMOR CELLS IMMUNOLOGICAL AND BIOCHEMICAL EVIDENCE FOR ALTERED CELL SURFACE ANTIGENS.

=> d his

(FILE 'HOME' ENTERED AT 09:15:12 ON 19 JUL 2005)

FILE 'MEDLINE' ENTERED AT 09:15:22 ON 19 JUL 2005
E SCHIRRMACHER V/AU
L1 280 S E3
L2 29 S E4
L3 0 S L1 AND ACTIVATION BY CANCER VACCINE
L4 7 S L1 AND CANCER VACCINE
L5 0 S L2 AND CANCER VACCINE
L6 12 S L2 AND CANCER

FILE 'BIOSIS' ENTERED AT 09:19:48 ON 19 JUL 2005
E SCHIRRMACHER V/AU
L7 344 S E3
L8 90 S E4
L9 4 S L7 AND CANCER VACCINES
E VON HOEGEN P/AU
L10 49 S E3
L11 19 S E4